



## Table of contents

Editorial	i
Table of contents	iii
1. <b>Green lubrication technique for sustainable machining of AISI 4340 alloy steel</b> Ahsana Aqilah Ahmad, Jaharah A. Ghani, Che Hassan Che Haron .....	1
2. <b>Electrochemical machining (ECM) and its recent development</b> Chan Jia Yuan, Ahmad Shahrin Hijrie Abu Bakar, Muhamad Najib Roslan, Cheah Weng Cheng, Muhammad Nadzmie Syafiq Mohd Rosekhizam, Jaharah A. Ghani, Zaliha Wahid	20
3. <b>A rough surfaces deformation in grease lubricated roller bearing</b> Nurul Farhana Mohd Yusof, Foo Chun Yit .....	32
4. <b>A study of cavitation effect in a journal bearing using CFD: A case study of engine oil, palm oil and water</b> Zuraidah Rasep, Muhammad Noor Afiq Witri Muhammad Yazid, Syahrullail Samion .....	48
5. <b>Mechanical and thermal deformations effects on plain journal bearing with isoviscous boundary condition based on CFD and FSI methods</b> Muchammad, Mohammad Tauviqirrahman, Hieronimus Servatius Sena Soetopo, Jamari	63
6. <b>Fabrication and tribological characterization of aluminium alloy by using photochemical machining</b> Shahira Liza Kamis, Mohd Amirul Che Lah, Nuratika Shaheera Rahama, Nor Ashwani Abd Rahim .....	82
7. <b>Influence of short heat treatment on the microstructures and mechanical properties of Thixoformed aluminum alloy composite</b> Hanizam Hashim, Mohd Shukor Salleh, Mohd Zaidi Omar, Abu Bakar Sulong, Ammar Abd Rahman .....	96
8. <b>The investigation of PVD coating, cryogenic lubrication and ultrasonic vibration on tool wear and surface integrity in manufacturing processes</b> Mohd Hafis Sulaiman, Natasha A Raof, Aishah Najiah Danel .....	105

9. **Prediction of friction and wear during ball-on-flat sliding using multiple regression and ANN: Modeling and experimental validation**  
Zahid Mushtaq, M. Hanief, Suhail Ahmed Manroo ..... 117
10. **Enhancing the tribological characteristics of Jatropha oil using graphene nanoflakes**  
Zahid Mushtaq, M. Hanief ..... 129